

WHAT IS CLAIMED IS:

1. A method for distributing video over a network for display on a client device,
the method comprising:

storing model data representing a set in which action occurs;

5 generating video data representing action occurring;

capturing positional data representing a position of a camera during the action in
generated video; and

transmitting from a server to the client device as separate data items the model
data, generated video, and positional data, to thereby enable the client device to reproduce and
10 display a video comprising the action occurring at certain positions within the set.

2. The method of claim 1, comprising transmitting the model data in advance of
the video and positional data.

3. The method of claim 2, comprising the client device persistently storing the
transmitted model data for use with a plurality of video and positional data items.

15 4. The method of claim 1, comprising, prior to transmission to the client,
cropping the generated video data to eliminate some or all portions of the video in which no
action occurs.

5. The method of claim 4, wherein cropping the generated video data comprises
matting the video to separate the action from other portions of the video data.

20 6. The method of claim 5 wherein matting the video comprises generating a high
contrast black and white image of the video wherein a white portion of the image represents the
action, and cropping out all or part of a black portion of the image.

7. The method of claim 6, wherein generating a high contrast image comprises processing the video using a chroma keyer.

8. The method of claim 7, wherein generating the video data comprises recording action occurring in front of a blue screen, and wherein generating the high contrast image
5 comprises using a chroma keyer on the recorded video.

9. The method of claim 1, wherein capturing positional data comprises capturing data representing the position of the camera with respect to the action in the video data.

10. A method for receiving video over a network and presenting it on a client device, the method comprising:

10 receiving from a server as separate data items model data representing a set in which action occurs, video data representing action occurring, and positional data representing the position of the camera during the action in the generated video;

rendering the video data within the set at a position within the set determined using the positional data to thereby produce the video; and

15 presenting the video on a client device.

11. The method of claim 10, wherein the model data comprises graphical data representing a three-dimensional virtual set.

12. The method of claim 11, wherein the graphical data is configured to be rendered as a two-dimensional image at a plurality of viewing angles relative to a virtual camera.

20 13. The method of claim 12, wherein the positional data comprises orientation data representing the position of the virtual camera relative to the action in the video data, and wherein rendering the video data within the set comprises selecting a viewing angle for the set using at least the orientation data.

14. The method of claim 11, wherein rendering the video data within the set comprises mapping the video data as a texture map onto the model data.

15. A method for distributing video over a network, the video representing an actor in motion, the set being represented in a three-dimensional rotatable model stored on a client connected to the network, the method comprising:

eliminating all or part of the video not containing the actor including matting the video to separate the actor from other parts of the video;

transmitting from a server to the client as separate data items the video and positional data representing the position of the real camera relative to the actor in the video;

the client receiving the video and positional data;

the client determining based upon the positional data whether to rotate the three-dimensional model of the set to properly orient the video therein, and rotating the model accordingly;

the client rendering the video within the rotated model at a depth determined based upon the positional data; and

the client presenting the rendered video and set.

16. A system for preparing a video for distribution over a network to one or more clients, the video containing one or more actors, the system comprising:

a positional data capturing system for capturing position data representing a position of the one camera relative to the actors in the video;

a video compression system for reducing the video by eliminating all or a portion of the video not containing the actor, the video compression system including a matting system for matting the video to separate the actor from other parts of the video; and

a transmission system for transmitting compressed video in association with corresponding positional data and in association with model data representing a set within which the video is rendered for presentation by one or more clients.

11/11/2019 10:11:11 AM